

Permitted Emission Decrease

4.0 EMISSIONS INVENTORY - GAS WELLS

This source inventory estimates the change in emissions for new and abandoned gas wells within the study domain. The inventory utilizes changes in gas production since the baseline year of 1995 to estimate the emissions. The total quantity of gas produced in the study domain, by county, between 1995 and 2000 was obtained from the Colorado and Wyoming Oil and Gas Conservation Commissions (COGCC and WOGCC). The gas production figures are summarized below.

TABLE 4.1 - GAS PRODUCTION RATES

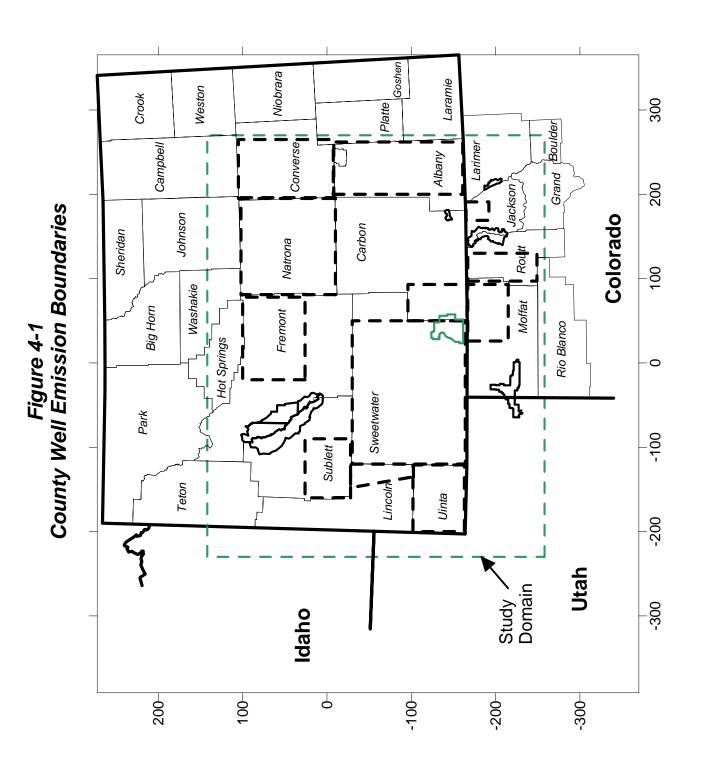
| County | 1995 Gas Production (Mscf) | 2000 Gas Production (Mscf) | Production Change (Mscf) | Percent Change in Production |
|----------------|----------------------------------|----------------------------------|--------------------------------|------------------------------------|
| Albany, WY | 15,598 | 13,598 | -2,000 | - 12.8 % |
| Carbon, WY | 76,625,614 | 81,438,230 | 4,812,616 | + 6.3 % |
| Converse, WY | 29,178,306 | 20,516,103 | -8,662,203 | - 29.7 % |
| Fremont, WY | 72,814,541 | 125,751,760 | 52,937,219 | + 72.7 % |
| Jackson, CO | 22,265 | 175,157 | 152,892 | + 686.7 % |
| Lincoln, WY | 107,798,424 | 87,623,617 | -20,174,807 | - 18.7 % |
| Moffat, CO | 15,819,335 | 15,148,728 | -670,607 | - 4.24 % |
| Natrona, WY | 22,217,774 | 53,175,311 | 30,957,537 | + 139.3 % |
| Routt, CO | 136,170 | 113,268 | -22,902 | - 16.82 % |
| Sublette, WY | 318,209,819 | 364,565,056 | 46,355,237 | + 14.6 % |
| Sweetwater, WY | 241,786,605 | 161,477,580 | -80,309,025 | - 33.2 % |
| Uinta, WY | 223,737,878 | 155,009,635 | -68,728,243 | - 30.7 % |
| Total | 978,589,329 | 1,065,008,043 | -78,701,742 | - 7.11 % |

Only NO_{χ} emissions were estimated for the change in well production, as SO_2 and particulate matter emissions from well sources are considered to be negligible. A NO_{χ} emission factor of 0.0003 tons per MMscf of produced gas was developed from the Desolation Flats well production inventory emissions and applied to the County gas production changes. Table 4.2 presents the calculated emissions change since the baseline date by county.

TABLE 4.2 - CHANGE IN NO_X EMISSIONS FROM GAS WELLS

| County | NO _x Emissions Change (ton/year) | |
|----------------|---|--|
| Albany, WY | 0.00 | |
| Carbon, WY | 1.44 | |
| Converse, WY | -2.60 | |
| Fremont, WY | 15.88 | |
| Jackson, CO | 0.05 | |
| Lincoln, WY | -6.05 | |
| Moffat, CO | -0.20 | |
| Natrona, WY | 9.29 | |
| Routt, CO | -0.01 | |
| Sublette, WY | 13.91 | |
| Sweetwater, WY | -24.09 | |
| Uinta, WY | -20.62 | |
| Total | -13.00 | |

The change in well emissions were represented as area sources for the analysis. As presented in Figure 4-1, the emission changes were applied to the region within the Counties with the greatest well abundance.



---- County Well Emission Boundaries